

IEPs for Students with Math Deficits

**IDEA Webinar Series: Developing
IEPs for Students with Academic
and Behavioral Needs**

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Pennsylvania Training and Technical Assistance Network

PaTTAN's Mission

The mission of the Pennsylvania Training and Technical Assistance Network (PaTTAN) is to support the efforts and initiatives of the Bureau of Special Education, and to build the capacity of local educational agencies to serve students who receive special education services.

PDE's Commitment to Least Restrictive Environment (LRE)

Our goal for each child is to ensure Individualized Education Program (IEP) teams begin with the general education setting with the use of Supplementary Aids and Services before considering a more restrictive environment.

Objectives

Participants will:

- Use data to identify present levels of performance in mathematics
- Interpret assessment data to set goals and objectives
- Determine appropriate program modifications, specially designed instruction, and educational placement to meet the needs of the student

Sections of IEP Interconnected

- Special Considerations
 - Blind/Visually Impaired
 - Deaf/Hard of Hearing
 - Having Communication Needs
- Access to math curriculum must be addressed
 - PLAAFP
 - MAGs
 - SDI

Mathematics Deficits: Present Levels

- Assessment information
 - Input of general education teacher important
 - Analysis of data sources to determine needs
- Parental concerns

Mathematics Deficits: Present Levels

- Student strengths and needs
- How does the student's disability effect involvement in the general education curriculum
- Successful (and unsuccessful) SDIs, Supplementary Aids and Services
- Student's present levels: instructional and grade level information

Example Present Levels **FOR TRAINING PURPOSES ONLY**

4th Grade Student with a Learning Disability (only disability):

- **Aimswest Computation:** 10th percentile at 4th grade level; 50th percentile at 2nd grade level
- **Aimswest Concepts and Applications:** 40th percentile at 4th grade level; 50th percentile at 3rd grade level
- **PSSA Grade 3:** Overall score in Mathematics – Basic. Scored lowest in Numbers and Operations. Much higher scores in Geometry, Algebraic Reasoning, Data Analysis and Probability, and Measurement. This coincides with ongoing 4Sight scores. Low scores on open-ended math problems. This coincides with classroom assessment
- **Classroom Assessment:** Consistently scores poorly on problem-solving and open-ended tasks. Consistent poor scores on any task related to multiplication and division. Student interview information indicates difficulty with math terminology (vocabulary), conceptual understanding of base-10 system, and any task that requires multiple steps (standard algorithms), determining plan of attack for open-ended problems)

Prioritized Needs Based Upon Data

- Math vocabulary
- Problem Solving
- Computation (multiplication and division)
- Multi-step algorithms
- Conceptual understanding of the base-10 system

Mathematics: Transition Planning

- Age 14 or older or younger if need determined by IEP team
- Include transition assessment in Present Levels
- Math required for postsecondary goals?
 - Courses of study

Participation in State/Local Assessment

- Which assessment is appropriate?
- Assessment with or without accommodations?
 - Based on student needs (documented in Present Levels, SDI)
 - Should mirror those currently provided during instruction

Measurable Annual Goals

- Observable and measurable
 - 4 components
- Based on information in present levels
- Must reflect student need
- Prioritize needs to determine appropriate goals
- Standards aligned
 - All/part of standard, concept, or competency

Measurable Annual Goals

- Functional goals?
- Short term objectives?
- Progress monitoring
 - Must measure progress toward MAGs
 - Frequent
 - Multiple data sources

Example MAGs

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Given weekly open-ended problems that include concepts related to the base-10 number system and precise mathematical terminology, James will correctly solve and explain his solution on 3 of 3 trials.

Given weekly tickets out the door, James will correctly solve 8 of 10 multi-digit multiplication and division problems on 4 of 5 trials.

Specialty Designed Instruction

- Determined based upon present levels, postsecondary goals, special considerations
- Determined based upon the demands of the general education curriculum (or other setting if appropriate)
- Supports for School Personnel

Example SDI

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- Use of graphic organizers (Frayer Model and Concept Circles) to preteach, introduce and review essential math vocabulary
- Student will be provided an open-ended problem per day related to the base-10 system
- Student will think aloud while solving open-ended problems and teacher to provide feedback and support as needed
- Student will be taught using a C-R-A methodology
- Student will be provided access to manipulatives during instruction
- Student will be taught strategic alternative algorithms for multiplication and division, to include ongoing review
- Weekly student interviews so teacher can assess for any misconceptions
- Teacher to observe student solving the type of problems assigned for homework to ensure student is practicing (the purpose of homework) correctly
- Ongoing practice (10 minutes/day) on basic facts practice on all operations

Educational Placement

- Determine services first, then placement
 - First consider the general education classroom with SaS before more restrictive setting
 - Be creative...special education is a SERVICE, not a PLACE
- Discuss placement questions to determine HOW/Where student will receive math instruction
- Determine type of special education supports

Example Placement **FOR TRAINING PURPOSES ONLY**

Student (James) will receive core mathematics instruction in the general education classroom. James will receive 30 minutes of focused instruction based upon his deficit areas at least 3 times/week during intervention period

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